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TWO NEW SPECIES AND SYNONYMY OF THREE SPECIES OF NORTH AMERICAN *CERCERIS* (HYMENOPTERA: PHILANTHIDAE)[1]

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Abstract.—A study of the relevant types in the genus *Cerceris* has resulted in the following synonymy (junior subjective synonyms in parentheses): *C. acanthophila* Cockerell (=*C. chilopsidis* Viereck and Cockerell), *revised synonymy*; *C. cockerelli* Viereck, *revised status* (=*C. minax* Mickel), *new synonymy*; *C. gandarai* Rohwer (=*C. micheneri* Scullen), *new synonymy*. Two species are left without names and are described as *C. grisselli* Ferguson n. sp. (=*C. minax*, sensu Bohart and Grissell, nec Mickel) and *C. rohweri* Ferguson n. sp. (=*C. gandarai*, sensu Scullen, nec Rohwer).

Five species of North American *Cerceris* are discussed. A study of the types representing the six names previously applied to these five species shows that the six names apply to only three of the species, leaving two species without names. These two species are described as new to provide names for a forthcoming synonymic list of North American *Cerceris*, and the synonymy for the other three species is presented.

Cerceris acanthophila Cockerell

Cerceris acanthophilus (sic) Cockerell, 1897:135 (Male lectotype, Deming, New Mexico; ANSP); Viereck and Cockerell, 1904:138; Cresson, 1928: 48; Banks, 1947:30; Scullen, 1951:1004, 1972:17.

Cerceris chilopsidis Viereck and Cockerell, 1904:136 (Female holotype, Rincon, New Mexico; ANSP); Cresson, 1928:48; Scullen, 1951:1005, 1965: 365; Bohart and Grissell, 1975:42; Bohart and Menke, 1976:578; Krombein, 1979:1731. **Revised Synonymy.** Synonymy first proposed by Banks (1947).

Banks (1947) first recognized that *C. acanthophila* and *C. chilopsidis* were the male and female, respectively, of the same species. However, Scullen

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(1960, 1965) misidentified *C. acanthophila* and used the name for the species discussed below as *C. cockerelli*. Scullen (1972) reversed himself and recognized *C. chilopsidis* as the female of *C. acanthophila*. Bohart and Grissell (1975) characterized and keyed both sexes of this species under the name of *C. chilopsidis*.

Cerceris cockerelli Viereck, **Revised Status**

Cerceris cockerelli Viereck, 1902:731 (Male lectotype, La Jolla, California; ANSP); Cresson, 1928:48; Banks, 1947:31; Scullen, 1951:1006, 1965:367 (as unrecognized species).

Cerceris minax Mickel, 1918:339 (Female holotype, Sacramento, California; NEB); Banks, 1947:34; Scullen, 1951:1008, 1972:18. **New Synonymy.**

Cerceris acanthophila, Scullen, 1960:75, 1965:355, in part; Krombein, 1967: 414; Bohart and Grissell, 1975:38; Bohart and Menke, 1976:576; Krombein, 1979:1729.

Scullen (1960, 1965) incorrectly applied the name *C. acanthophila* to this taxon, and this interpretation was followed by subsequent authors. Later he stated (Scullen, 1972:18) "*Cerceris chilopsidis* Viereck and Cockerell is, therefore, now considered a synonym of *C. acanthophila* Cockerell and *C. minax* Mickel is again accepted as a valid species." However, he ambiguously retained *C. minax* Mickel in his list of synonyms of *C. acanthophila*. Bohart and Grissell (1975) correctly recognized *C. cockerelli* as belonging to this taxon, but they used *C. acanthophila* as the senior name. The type of *C. minax* Mickel is conspecific with *C. cockerelli* Viereck.

Cerceris grisselli, new species

Cerceris acanthophila, Scullen, 1965:355, in part, figs. 108a, b, c.

Cerceris minax, Bohart and Grissell, 1975:49, map 36, figs. 99, 100, 124, 125; Bohart and Menke, 1976:584; Krombein, 1979:1739.

Bohart and Grissell (1975) first recognized this taxon as a species distinct from *C. cockerelli*. Although Scullen (1965) had specimens of both species before him, he did not discriminate between them. Bohart and Grissell (1975) figured and keyed the differences between the two species. Unfortunately, they used the name *C. minax* for this species, but the holotype female of *C. minax* Mickel is clearly a specimen of *C. cockerelli*. The *minax* of Bohart and Grissell (1975) is thereby left without a name.

The female pygidium in *grisselli* is abruptly constricted distally with the sides subparallel over the apical one-third, whereas in *cockerelli* the sides are rather evenly tapered toward the apex. In the male the clypeal brush of

cockerelli is dense, rectangular, wider than long, whereas in *grisselli* the brush is rather loose and tapered toward the apex.

Description. Jugal lobe of hind wing about ⅓ as long as submedian cell; stigmal and prestigmal veins brown, slightly paler than subcosta; apicomedian fossette present on tergum I; sternum II with basal platform; complete longitudinal carina on inner ventral margin of coxa III; tegulae evenly convex, not pitted; propodeal enclosure usually weakly ridged; scutal punctures separated by 1 to 3 puncture diameters, at least across middle; propodeal punctures dense, separated by ridges of 0.3 to 0.5 puncture diameter; punctation of preapical terga as on propodeum. FEMALE: Length 8–10 mm; clypeal midsection with low, transverse lamellate process separated apically from clypeal margin by scarcely the length of flagellomere IV, apical margin of process usually emarginate with distinct apicolateral corners and about as wide as subantennal sclerite; mesopleural tubercle and precoxal carina strong; pygidium narrow, about 2.5 times as long as greatest width, constricted basally, abruptly narrowed apically with sides subparallel over apical 0.3; pygidial surface smoother on apical 0.3 than on basal portion. MALE: Length 7–9 mm; clypeal midsection with numerous to dense micropunctures between macropunctures, with 3 short, blunt teeth apically, and about as wide as midlength (width measured between tentorial pits); antennocular distance about equal to length of flagellomere I; clypeal brush scarcely as wide as least clypeo-ocular distance, tapered toward apex, hairs not agglutinated or waxed; sterna IV–VI without apicolateral teeth; pygidium subrectangular, slightly bowed outward medially. COLOR: Black with yellow markings as follows: clypeus except lip; subantennal sclerite partly or entirely; lateral sections of face from above sockets to clypeus; scape below; basal half of mandible; spot behind eye; tegulae in part; lateral stripes on pronotal collar; metanotum; spot on hypoepimeron sometimes present in female; anteriorly emarginate transverse bands on terga I–V (female) and terga I–VI (male), often reduced on tergum I and penultimate tergum, less strongly emarginate in male than in female; one or more sterna with lateral spots or transverse band; trochanter III in part or entirely; apical 0.3 to 0.5 of femora; tibiae and metatarsi. Apical 0.25 of metatarsus III and tarsomeres II–V infuscated; some tarsomeres of anterior legs tinged with red.

Holotype. Female, California, Los Angeles County, Tanbark Flat, VI-25-50 (A. T. McClay); UCD. [The holotype female is the specimen used by Scullen (1965) for his figures 108a, b, c under the name *acanthophila.*]

Paratypes. 71 males, 26 females all from California, Los Angeles County, Tanbark Flat as follows: 5 males, 8 females same date as holotype (P. D. Hurd, A. T. McClay, F. X. Williams) (UCB, UCD, CAS, MIS); 59 males, 10 females, VI-15-50 to VII-25-50 (H. M. Graham, J. C. Hall, P. D. Hurd, A. T. McClay, W. O. Marshall, K. G. Whitesell, F. X. Williams) (UCB,

UCD, CAS, MIS, OSU); 4 males, 5 females, VI-29-52 to VII-13-52 (R. L. Anderson, D. E. Barcus, A. A. Grigarick, A. T. McClay, B. Miyagawa, S. Miyagawa) (UCD); 3 males, 3 females, VI-18-56 to VII-18-56 (R. C. Bechtel, R. M. Bohart, R. W. Bushing, J. I. Stage) (UCB, UCD).

Other specimens. In addition to the type series I have examined 171 males and 52 females.

Distribution. Known only from California. Bohart and Grissell (1975) provide details of distribution under the name *C. minax.* A series of specimens (OSU) from California, Modoc County, Adin Pass, 5,000 ft., July 30, 1955 (G. R. Ferguson, Joe Schuh) extends the range of the species northward.

This species is named for E. E. Grissell who, with R. M. Bohart in Bohart and Grissell (1975), first showed that it was a distinct species.

Cerceris gandarai Rohwer

Cerceris gandarai Rohwer, 1912:470 (Male holotype, Federal District, Mexico; USNM).

Cerceris micheneri Scullen, 1972:86 (Female holotype, Metachic, Chihuahua, Mexico; AMNH); Bohart and Menke, 1976:584. **New Synonymy.**

This species was described, figured and keyed by Scullen (1972) under the name of *C. micheneri.* However, a study of the male holotype of *C. gandarai* shows that Scullen (1972) misidentified Rohwer's species. It is in fact conspecific with and a senior synonym of *C. micheneri.* The type female, allotype male, and several paratypes of *C. micheneri* have been studied.

Cerceris rohweri, new species

Cerceris gandari (sic), Scullen, 1972:82, figs. 156a, b, c, d.

Cerceris gandarai, Bohart and Menke, 1976:581; Krombein, 1979:1734.

This species was described, figured and keyed by Scullen (1972) under the name *C. gandarai.* Since the name *C. gandarai* must now be applied to the species previously known as *C. micheneri,* the species treated by Scullen (1972) as *C. gandarai* is left without a name and is described here as *C. rohweri.* It and true *gandarai* belong to an as yet undefined group of small species, most of which occur in the central plateau area of Mexico and contiguous portions of the United States. In having a fossette on tergum I and a variably developed basal platform on sternum II, the group is allied to the *Cerceris finitima* group but separable by the absence of a carina on coxa III.

In both sexes *C. rohweri* lacks microridging between punctures on the scutum, whereas these microridges are conspicuous in *C. gandarai.* Female *C. gandarai* has an elevated, truncate process on the clypeal midsection; in

C. rohweri this process is absent, and, instead, there is a pair of somewhat rounded, subquadrate lobes on the apical margin of the clypeal midsection. In the male the clypeal brush of *C. gandarai* is somewhat tapered toward the apex and not wider than the distance from the tentorial pit to the eye margin; in *C. rohweri* the clypeal brush is rectangular and wider than the distance from the tentorial pit to the eye margin.

Description. Jugal lobe of hind wing 0.3 times length of submedian cell; fossette present on tergum I; carina absent on coxa III; basal platform of sternum II a low, rounded swelling in male, essentially absent in female; propodeal enclosure shiny with numerous micropunctures, median furrow complete, crenulate; tegulae longer than wide, smooth; deflected posterior portion of metasternal plate with triangles broadly fused at base, carinate between. FEMALE: Length 9–11 mm; with small, sharp mesopleural tubercle; mandible with large, broadly triangular tooth a little basad of middle; clypeal midsection evenly convex, without a projecting process, terminating apically in a pair of broad, subquadrate, slightly outturned lobes, fused at base and with a transverse depression at base of lobes; eyes slightly divergent below; macropunctures of clypeus and lower face well separated with numerous micropunctures on lateral clypeal sections and lower face; punctation denser in front of ocellar triangle than behind; scutal punctures separated by 0.5–1 puncture diameter, at least across middle; anterior part of mesopleuron with a few ridges between punctures, punctures separated by flat ridges on disc; propodeal punctures separated by many thick ridges of 0.5–1 puncture diameter on side of and behind enclosure; punctures of black portions of terga III–IV dense, some contiguous, some separated by flat, shagreened ridges of 0.25–0.5 puncture diameter, pale portions with well separated coarse punctures; pygidium narrowly oval, twice as long as midwidth, uniformly rugose without pits at base, about as wide apically as basally. MALE: Length 7–8 mm; mandible edentate; clypeal lip edentate, about as wide as subantennal sclerite; clypeal brush strong, waxed, cupped, wider than clypeal lip; clypeal midsection 1.2 times as long as width between tentorial pits; eyes parallel; punctures of clypeus and lower face separated mostly by 1 or more puncture diameters; punctures on scutum, mesopleuron, propodeum and terga as in female except ridges between punctures absent; pygidium subrectangular, 1.8 times as long as greatest width, not widened basally, slightly narrowed apically, slightly bowed out on the sides, coarsely punctate. COLOR: Black with following parts yellow: base of mandible (sometimes absent in male); clypeus except apically and basally in female and apically in male; lower face from above sockets; spot on subantennal sclerite in male; small spot behind eye in female; interrupted band on pronotum; metanotum; tegulae in part; lateral spot on propodeum of female; interrupted band or spots on tergum I, sometimes absent in male; posterior

bands on preapical terga, shallowly emarginate anteriorly; lateral spots on sterna III–IV. Legs black and yellow suffused with red; tibiae I–II, except dark spot behind, and trochanter III pale; femora with narrow, red apical band in female, basal half pale in male; tarsi I–II reddish, less so in male; tarsi III infuscate. Forewings with brownish infuscation along anterior one-third; antennae with scape and pedicel black, flagellum brown below.

Holotype. Female, 17 mi. NE San Luis Potosi, S.L.P., Mexico, 6,200 ft., Sept. 6, 1963 (Scullen and Bolinger); USNM.

Paratypes. 48 males, 12 females, all from the state of San Luis Potosi, Mexico, as follows: 40 males, 7 females, same data as holotype (CAS, UCD, OSU, USNM); 2 males, 19 mi. SW San Luis Potosi, 7,200 ft., IX-4-63 (Scullen and Bolinger) (OSU); 5 males, 1 female, 40 mi. S San Luis Potosi, 5,700 ft., IX-5-63 (Scullen and Bolinger) (OSU); 2 females, 15 mi. E San Luis Potosi, 6,500 ft., X-3-57 (H. A. Scullen) (OSU); 1 female, 18 mi. SW San Luis Potosi, 7,300 ft., X-2-57 (H. A. Scullen) (OSU); 1 male, 1 female, 10 mi. NE San Luis Potosi, 6,200 ft., VIII-22-54 (R. R. Dreisbach) (MIS).

Other specimens examined. 113 males, 20 females, from several states in Mexico as follows: OAXACA: 18 males, 2 females, 5,600–6,850 ft., VI-27 to VIII-23 (OSU); PUEBLA: 9 males, 2 females, 5,380–6,900 ft., VI-7 to VIII-24 (UCB, OSU); MEXICO: 17 males, 9 females, 7,400–8,550 ft., IV-7 to VIII-30 (MIS, OSU); VERACRUZ: 1 male, 5,000 ft., VI-9 (OSU); QUERETARO: 46 males, 2 females, 6,500–7,400 ft., VI-13 to IX-19 (OSU); AGUASCALIENTES: 1 male, 1 female, VIII-3 to VIII-9 (OSU, USNM); ZACATECAS: 6 males, VII-3 to VIII-20 (MIS, OSU); DURANGO: 9 males, 2 females, 6,000–7,100 ft., VI-17 to X-23 (MIS, OSU); COAHUILA: 1 male, 4,450 ft., IX-9 (OSU); NUEVO LEON: 5 males, 2 females, 4,600–7,200 ft., VIII-30 to IX-22 (UCB, OSU, USU).

Scullen (1972) lists additional records (as *gandarai*) including a female from Brooks County, Texas.

This species is named for the late S. A. Rohwer, long time student of aculeate and other Hymenoptera, who described the species with which this species has been misidentified.

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